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ABSTRACT

In an attempt to deal with the paperwork explosion occurring in business offices, administrative management has developed the concept of word processing as a means of increasing office efficiency. Thus, the purpose of this study was to provide business educators with information on this new management tool and to identify those skills needed by word-processing technicians. Word processing is defined as the combination of procedures, personnel, and equipment required to accomplish the transformation of ideas to printed form. The principal party involved in this process is the typist or secretary, usually utilizing the automatic typewriter and a dictation machine. The report includes a discussion of office organizations, management techniques, and the role of the secretary. (JS)

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THE DEVELOPMENT OF WORD PROCESSING AND ITS IMPLICATIONS FOR THE BUSINESS EDUCATION PROFESSION

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TABLE OF CONTENTS

CHAPTER		Page
I.	INTRODUCTION	1
	Statement of the Problem	1
	Significance of the Problem	1
	Purpose of the Study	3
	Footnotes	4
II.	FINDINGS	5
	Nature and Origin of Word Processing	5
	Hardware	6
	Automatic Typewriters	6
	Dictating Equipment	9
	Organization	11
	Office Size as a Factor	11
	Survey	12
	Initial Problems	13
	Promoting Word Processing	14
	Management and Administration	15
	Extent of Use by Public Organizations	15
	Management Techniques	16
	Control Techniques	17
	Training Requirements	18
	Secretary's New Role	19
	Career Groups	19
	Job Enrichment	20
	Implications for Educators	20
	Educational Requirements	22
	Future of Shorthand	23
	Footnotes	24
III.	RECOMMENDATIONS AND CONCLUSION	28
	Recommendations	28
	Conclusion	29
	Footnotes	30
	SELECTED BIBLIOGRAPHY	31

CHAPTER I

INTRODUCTION

Statement of the Problem

The paperwork explosion occurring in business offices today has become a problem of major proportions. Administrative management has developed the concept of word processing in an attempt to alleviate this condition and increase office efficiency. Business educators need to be knowledgeable about this new management tool and be aware of its implications regarding student training requirements. The problem, then, was to explore the concept of word processing and determine its effect on the business curriculum.

Significance of the Problem

An estimated one million new pages of paperwork are being generated every single minute of every working day.[1] Yet, the means of dealing with this problem had, until recently, been lacking because automation had taken hold in every sector of American business except the business office itself.

The equipment and methods used by office workers had not changed basically over the past 100 years except through the introduction of dictating equipment and the electric typewriter. So, as F. J. Steinberg of IBM stated recently, "While the nation's new products are whizzing off the assembly lines, a simple letter gets clogged in the typewriter."[2]

Not only were the numbers of letters produced increasing, so was the average cost per letter. The Dartnell Institute of Business Research has been keeping records of letter costs since 1953. The latest figures released by Dartnell[3] indicated that the average cost of producing a letter was $3.20 in 1972, up one cent from the previous year. This was the smallest increase in ten years, the average being between 5 and 35 cents per year. The Institute listed as possible reasons for the lower increase the fact that wages were controlled during part of the year and also the fact that office productivity increased.

A Southern utility company made a detailed study of what it cost to produce a 250-word document using the four methods listed on the following page.[4] The company found that the most highly automated method of producing the document was also the most economical. Included in the costs was the time the executive took to formulate the dictation.

Another factor contributing to the paperwork explosion was the decrease in the availability of highly skilled secretaries and typists.[5] Evelyn Berezin, president of Redactron Corporation, a major supplier of word processing equipment, believed the reason for this was that at one

TABLE 1

COST TO PRODUCE A 250-WORD DOCUMENT USING FOUR METHODS

	Longhand	Stenographer	Machine	WP Center
Labor				
Originator's Time	$4.65	$2.50	$2.10	$2.10
Processor's Time	1.55	2.55	1.00	.45
Total	$6.20	$5.05	$3.10	$2.55
Material	.01	.01	.02	.05
Total Cost	$6.21	$5.06	$3.12	$2.59*

*Does not equal because of rounding to nearest cent.

time all young women, regardless of their technical or professional skills, had to learn shorthand and typewriting to gain entrance into the business office. Today this is no longer the case. their training is immediately saleable without their having to learn office skills.[6]

Another problem under the traditional office setup has been the inbalance of secretarial work. Frequently one worker would be idle while another was overloaded with typing, dictation, and telephone calls. At First National Bank of Chicago, for example, a survey uncovered peaks and valleys in secretarial usage. Secretaries were idle in the morning but overworked in the afternoon because many executives were not free to dictate until then.[7]

Inefficient use of executive time has been still another problem. Every time he sent a revised draft back for retyping, no matter how small the change to be made, the executive had to reproof it. At IBM, a study showed that 52 percent of the secretary's day was spent typing. A follow-up study of the 133 secretaries revealed that they typed an average of 101,000 lines a day, of which 39,000 lines were retypes, an average waste rate of 38 percent. This meant that "26 secretaries out of the study group (of 133) were, in effect, typing for the wastebasket."[8]

By the early 1960's, office managers were convinced that the old routine--find a stenographer, dictate the letter, wait for it to be transcribed, correct it, wait for it to be retyped, proofread again, and sign--had to go. A way was needed to speed up the production of written communications. Steinberg described the problem: "Something had to be done. Somehow, somebody, somewhere had to develop a concept for handling paperwork that would begin to duplicate in the modern office the advances that have been made in modern manufacturing."[9]

That meant incorporating into office production two leading principles of modern technology: automation and systemization. The officials at Saab Motors, Inc., stated the solution when they noted that their company "decided to institute the same systems approach to the processing of paperwork as it did to the manufacture of cars."[10]

Purpose of the Study

The purpose of this study was to provide business educators with information on word processing. It was believed that this concept will have such a major impact on the office environment that all business educators must understand its operation and significance.

A secondary purpose of this study was to identify the skills and other areas of learning needed by word processing technicians. This would provide a partial basis for revising business courses to reflect these new employment needs, resulting in a more relevant and realistic curriculum.

FOOTNOTES

[1]F. J. Steinberg, "Getting Rid of the Horse and Buggy Approach to Paperwork," Women in Business (March/April 1970), p. 52.

[2]Ibid.

[3]"Cost of Letter Up One Cent," Administrative Management (April 1972) p. 55.

[4]"What It Costs To Produce a 250-Word Document," Administrative Management (April 1972), pp. 46-47.

[5]Evelyn Berezin, "Word Processing Frees Secretaries," The Office (February 1972), p. 12.

[6]Ibid.

[7]Edward M. Sullivan, "'Word Processing': Vital New Concept," Mid-Western Banker (July 1971), p. 26.

[8]John J. McGlynn, "IBM's Conversion to Word Processing," Professional Management Bulletin (October 1971), p. 37.

[9]Steinberg, op. cit.

[10]"Streamlines Correspondence from Headquarters to Dealers," Motors (1971), p. 53.

CHAPTER II

FINDINGS

Nature and Origin of Word Processing

The Word Processing Institute defines word processing as "the combination of procedures, personnel, and equipment to accomplish the transformation of ideas to printed form"[1] In practice, it is the streamlining of the typing environment into a high-production, highly automated, highly specialized center for typing operations. This involves separating those secretarial duties that are repetitive and having them performed instead by machine. "The question is not whether you have a word processing system," states Walter Kleinschrod, editor of Administrative Management, "You do. The question is, how good is it?"[2]

It would be misleading to call word processing centers "automated typing pools," and leave it at that, because typing and steno pools have been around for many years. Shirley Englund, editor of The Secretary, notes, however, that word processing centers differ from traditional typing pools mainly "by the more sophisticated equipment, particularly typewriters capable of production-line performance of typewritten communications that just a few years ago would have been classified as science fiction."[3] These typewriters allow the operator to type at rough-draft speed, correct her errors simply by backspacing and typing over them, and then "play back" the document (which was being recorded on magnetic or paper media) automatically at 150 words per minute.

Even though her typing speed may be 60 words per minute, the average typist transcribes from shorthand at the rate of 15 words per minute and from machine dictation at the rate of 20 words per minute when using an electric typewriter.[4] But by using these new automated typewriters, her effective speed is increased to as much as 30 words per minute.[5]

Consultant George Simpson, president of the Word Processing Institute, estimates that there is a 55-percent saving of time from machine dictation over shorthand and a 57-percent saving of money.[6]

A recent Administrative Management Society survey indicated that typing costs drop almost two thirds when a company uses dictation equipment.[7] For one thing, the dictator can talk into a machine twice as fast as he can dictate to his secretary and four times as fast as he can write it out in longhand.[8] Machine dictation at the rate of 80-100 words per minute is not uncommon and represents quite an improvement over the longhand speed of just 15 words per minute.[9]

The dictator can also handle correspondence at any time that is convenient to him--not just during office hours and when his secretary is

available. The recorder provides him immediate access to a method of getting his thoughts and words down into hard copy. Recent studies show that it is much easier for most executives to communicate by voice rather than by handwriting.[10]

The executive using a recorder can, of course, change his dictation as often as he likes simply by recording over the unwanted material. This helps him to clarify his thoughts, resulting in clearer and more concise dictation.

The concept of word processing had its origins in Germany. Ulrich Steinhilper, office products manager for IBM's Germany division, conceived the basic idea after IBM had introduced the Magnetic Tape Selectric Typewriter (MT/ST) in 1964. His theory was that savings of both time and money would result from channeling all dictation to a central transcribing center where all the typing would take place using magnetic-media typewriters. He called his idea "Textverarbeitung" (literally, text processing) and reorganized IBM's Germany offices around it. Within a year, the concept was introduced into the United States and was translated into English as word processing.[11]

The automatic typewriters associated with word processing have three main functions:[12]

1. Revision typing: Preparation of frequently revised material such as customer lists, mailing lists, and directories. Only the changes have to be rekeyboarded each time.

2. Power typing: Production of perfect copy of dictated material without erasures and incorporating editorial changes between drafts. Here again, only the changes have to be retyped, and the typewriter plays the entire revised document out automatically.

3. Repetitive typing: The oldest of all word processing operations. This allows the automatic typing of general and form letters with only the variable information having to be rekeyboarded. What is actually a form letter will appear to be an original to each of the recipients. One result of this more personal appearance is quicker responses, and some companies even report a favorable effect on collections.[13]

Hardware

Automatic Typewriters

In attempting to list a hierarchy of automatic typewriters, the ones designed for repetitive typing would occupy the lowest rung on the ladder. All automatic typewriters can be used for repetitive typing, but some have additional features. The automatic repetitive typewriter was one of the first true automated machines (even before the word "automation" had come into popular use.)[14] Repetitive typing operations represent the largest percentage of word processing applications, a 1969 survey revealed more than seven times as many uses for repetitive typing as for power typing.[15]

A typical automatic repetitive typewriter (Flexowriter and Auto-Typist are the giants in the field) has a control panel with numbered buttons or switches that correspond to the stored or "canned" material on the memory tapes. To produce a letter, the operator simply pushes a button for the complete letter, or a series of buttons to select individual paragraphs to make up the complete letter. Stopping points are programmed for the manual typing in of names, addresses, amounts, and other unique data.

Because they are less sophisticated than the editing or revision machines, the repetitive typewriters are also less expensive. And because, in most instances, the largest volume of letters are of a repetitive nature, some companies are using these repetitive typewriters as complementary units to the editing and revision typewriters. This allows the more expensive editing typewriters to be used only for that purpose while the repetitive typing is produced on the less expensive machines, thus producing a more efficient operation.

Next in terms of sophistication are the text-editing or revision typewriters. The IBM Selectric is the machine around which word processing has evolved. In addition to being nested in the IBM Magnetic Tape Selectric Typewriter (MT/ST) and Magnetic Card Selectric Typewriter (MC/ST), the Selectric is also used in the word processing hardware sold by Edityper, Quin-Data, Itel, Redactron, Ricoh, TyData, and others.

This is not to imply that all automatic typewriters are the same. The differences are, however, chiefly in the components that drive the Selectrics, in the recording medium used (magnetic tape, magnetic card, paper tape), and the effect these differences have on operation ease, speed, and cost.[16]

There are two Selectric models from which to choose--the regular version and the heavy-duty "I/O" which runs quieter and is more expensive. Since most manufacturers use the Selectric typewriter, their machines all play back at the same general speed of 150 to 175 words per minute, although in practice the case shifts, carrier returns, and tabbing operations might slow this down somewhat.

In general, all text-editing machines have a forgiving keyboard that works on the same principle as rerecording over a tape recorder tape: backspacing and typing the correct information over the incorrect characters erase what was previously recorded, and the new material cancels out the old.

To correct an error after the paper has been removed from the machine or to revise a draft, the original magnetic or paper tape or card is reinserted into the machine and the operator plays back the document until she reaches the point where a change is to be made. She types in only the changes and then pushes the button for further playback. Only the changes are typed manually, and the unchanged portion is automatically typed at 150 words per minute. At the same time a fresh tape is being made of the revised copy in case further changes are forthcoming. Because only the revised portions of the draft have to be proofread, this saves dictator proofing--an expensive use of executive time.

The MC/ST has a capacity of 5,000 characters, the equivalent of more than a full page of text. The MT/ST has a storage capacity of 28,000 characters, or approximately 7 1/2 pages of single spaced copy. The storage capacity for other word processing systems goes up as high as 30 pages of typed information.[17]

Right-hand margin control is provided by means of a "hot zone" (consisting of from zero to ten spaces) which stops the machine when it reaches the predetermined number of spaces from the desired line ending. The operator then manually types in the remainder of the line.

As with data processing, there is a controversy over the relative merits of paper versus magnetic tape in word processing equipment. On the basis of cost, paper tape is cheaper, costing about three cents per thousand characters, while magnetic tape costs 62 cents per thousand characters.[18] Paper tape has an additional advantage in that one can see the punched holes in the paper, and an experienced operator can actually read the perforations. Magnetic tape, on the other hand, can be used over and over.

The Magnetic Card Selectric Typewriter (MC/ST) is a relatively new development from IBM. It operates on the same principle as the MT/ST except that instead of a magnetic tape it utilizes a magnetic card the size of the standard punched card.

Some automatic typewriters come with one input station, while others come with two or even three. The one-tape models require manual keyboarding of the variable data, and the machine automatically types the body of the letter.

On the two-tape machines, one tape may contain the "canned" letter and basic format and the second tape the variable information, such as the name and address or policy number. Guided by a preset program, the machine will merge the contents of the two tapes, automatically switching back and forth to select the appropriate material. The typewriter has a search-code facility that allows it to search back automatically to the beginning of the letter after completing the previous one. This prevents the operator from having to reload the tape manually each time. And through the use of continuous-form letterhead paper, a quantity of form letters can be produced without operator intervention.

The three-tape system combines material from the two tapes onto a third tape. This new tape can then be stored or later played back.

Many companies with extensive reproduction requirements purchase the IBM Magnetic Tape Selectric Composer system (MT/SC) as complementary equipment for the word processing center. This machine prepares camera-ready copy from the magnetic tape prepared on the automatic typewriter, so no additional keyboarding is required. The image produced is comparable in quality to that produced by the hot metal process at a fraction of the cost.[19]

As with any Selectric, different sizes and styles of type can be used on the Composer to contrast and highlight the important points to be emphasized in the document. The proportional-spacing feature allows right-margin justification which increases the attractiveness of the document. It also permits

more than one third more copy per page. This reduces costs in several ways. First of all, fewer plates, less stock, and fewer press runs are necessary. Since the reports are shorter, mailing costs are reduced. And the material also requires less storage space.

The U.S. Department of the Interior's Bureau of Reclamation office in Denver is one organization that uses the Composer system to print its specifications and publications. These run into several hundred pages each and thousands of copies must be printed. Since the Bureau purchased the equipment, it has been able to reduce printing costs by 40 percent.[20]

Noise pollution may be a serious problem with which to contend in word processing centers, especially when the automatic typewriter or Composer is playing back at 150 words per minute. Several tests have proven that office machine noise decreases employee productivity as well as harms health. One such study showed that typists require 19 percent more energy to do their work in a noisy environment than in a quiet one.[21]

There are several ways to reduce the noise levels in word processing centers. Carpeting, acoustical ceilings, and insulated partitions will help. One of the most effective noise-abatement measures may be an acoustical enclosure for the power typewriters. These do not inhibit their use and provide normal access and operation of the equipment.

Dictating Equipment

The sophistication of the new editing and revision typewriters is matched by new dictating equipment. These machines have come a long way since 1887 when Thomas Edison predicted that his new phonograph would primarily be used in "letter writing and all kinds of dictation without the aid of stenographer."[22]

There are four major types of dictating equipment available on the market today and, theoretically, any of them can be used in a word processing center. As a matter of practicality, however, most large word processing centers use either the centralized telephone systems or endless-loop systems and rely on the desk units and portable units as backup for supplementary and traveling purposes.

The centralized telephone dictating units are accessed through the regular Bell telephone network, often via the company's PBX switchboard. To dictate, the dictator (or "word originator" in word processing language) simply dials the word processing center, where he is automatically connected to a recorder, and begins to speak. If one recorder is busy, the next one will activate automatically so that the dictation is received without interruption. The executive begins by identifying himself, his department, and telephone extension (in case the transcriber has a question) and then continues with his dictation.

Dictation is recorded on magnetic-belt recorders in the word processing center. These belts hold approximately 14 minutes of dictation. A buzzer warns both the dictator and the word processing center coordinator of the approach of the end of the belt time. When the belt is completely filled,

the buzzing noise is so loud that the dictator cannot continue; this prevents him from ever speaking into a dead machine.

Corrections or special instructions are indicated by dialing "2"; this punches a hole on the recorder index slip in the center. Noting this indication, the transcriber will scan the dictation before beginning to type, thus avoiding costly restarts.

Most centralized dictating equipment is voice actuated and comes with a "kickback" feature--when a predetermined time has elapsed without dictation (usually between six and ten seconds), the machine kicks back the recording head to close the gap, thereby eliminating periods of silence and saving both belt space and transcriber time. This feature is especially useful when the dictator is first becoming accustomed to machine dictation.

At any time during his dictation the dictator can review the last ten or so words spoken by dialing "3." If he wishes to review further, he simply redials "3." After the playback is finished, the dictator dials "1" and continues with his dictation. A special "lockout" feature insures the privacy of dictation by preventing the playback of previously dictated material.

To end the dictation, the executive hangs up, which again automatically punches a hole in the index slip on the recorder. If the dictator has more than one letter to record, he dials "4" to indicate the end of the previous document and then dials "1" to begin again.

Endless-loop or tank central dictating systems are accessed through private lines instead of through the Bell telephone network. They utilize a central continuous-flow magnetic tape loop capable of storing 40,000 words, or approximately three hours of dictation. A push-button device similar to a telephone receiver is used to input these units. Special microphones operated by foot pedals can be provided for special needs such as in a hospital pathology department where technicians need both hands to adjust their microscopes and slides.

One of the advantages of these units is that both recording and transcribing may be done simultaneously. In fact, transcription is possible a mere 16 seconds after dictation begins, an especially helpful feature for rush projects. Also, since these systems utilize a continuous loop, time is not lost changing and waiting for belts to be collected and loaded. Another advantage is that dictators can dictate from home or while on the road by simply calling the word processing center and connecting into a recorder. The telephone systems can also be accessed at night, but inasmuch as each belt will hold only 14 minutes of dictation, a special device must be installed to allow automatic switching to a free recorder.

The endless-loop system is not without its weaknesses. One is the first-in, first-out nature of the system; if a dictated report is needed in a hurry, the transcriber often has to listen to other dictation before locating the desired document. And reports might be lost because the typist skipped over portions of the tape. Some manufacturers have avoided this problem by developing a priority-search feature which aids in locating priority dictation.

Another potential weakness of the endless loop is that it can accept dictation by only one person at a time. Several systems have to be coupled into a mother distribution unit in order to accommodate more than one dictator simultaneously.

The third group of dictating equipment, the desk-size units, represents the largest use of dictation equipment today.[23] These machines are economical, but because the recorder belts must be transported to and from the word processing or typing center, the efficiency of a truly automated word processing center does not result. Many companies with centralized dictation systems do utilize desk-size units for long reports so as not to tie up their phone lines for long periods of time.

Most companies with centralized dictation systems also provide portable dictation units to allow executives to take advantage of dictation as it occurs, at home or on the road. These portables are battery powered, lightweight, and pocket sized. They will record up to ten minutes on a magnetic belt or up to thirty minutes on cassette tapes. Authorities believe that cassette tapes will probably dominate future equipment.[24]

The cassettes are especially handy when traveling in that the dictator can address and stamp the cassette and drop it in the mail. Even the magnetic belts can be slipped into an envelope and mailed back to the word processing center. Either way, the transcribed material is waiting for the executive when he returns to the office.

Organization

A word processing center is not something that can be organized on a moment's notice, nor can the responsibility for its organization be delegated to some minor official of the company. A successful word processing center requires the support of top management and an organization that is geared to change.[25]

Jack Pettit, administrative vice president of MFA Insurance Companies (which has one of the world's largest word processing centers--62 machines) makes the point this way: "The words in some insurance policies are cast in concrete, and so, unfortunately, are some of the procedures we have used to produce them. These procedures are what must be changed despite resistance."[26] Kleinschrod echoes this sentiment: "Make no mistake: To manage it well you do revamp the system. As with EDP, simply automating old routines spells trouble."[27]

Office Size as a Factor

The question frequently arises as to how large the company must be before it can successfully convert to a word processing system. Kleinschrod believes "it is the big-company approach where the volume of work and the sizeable administrative savings justify a top-to-bottom revamping of procedures and a heavy investment in hardware."[28]

Other writers do not agree that only large companies can effect savings by converting to word processing. Although his company obviously stands to gain from the widespread adoption of word processing equipment, John J. McGlynn, of IBM, insists that word processing can be used in one form or another in any office in which secretaries spend as much as 40 percent of their time typing.[29]

It is true, as a matter of fact, that many small and medium-sized companies have successfully converted to word processing in the past few years. Avdel Corporation, for example, whose New Jersey office employs only 110 people (12 of whom originate paperwork) has installed a small center consisting of only three dictation recorders and two automatic typewriters. It is run by two secretaries who now turn out all the work that it formerly took seven employees to handle and without the difficulties once experienced.[30]

Kleinschrod suggests as a happy medium for the smaller offices the employment of the "typing specialist."[31] This is a compromise between the traditional office environment and the fully automated, centralized word processing center. The specialist setup is not a centralized operation--the specialist remains in the same general vicinity of her superior, and the personal touch is not sacrificed (as generally happens with the centralized centers). This type of arrangement operates as follows:

> The specialist becomes part of a work group serving a limited number of related executives. Her specialty is typing; she has automated equipment and knows how to run it to advantage. Others in her group take care of the phones, the filing, a wide range of duties.[32]

The important point is that the work flows because less time is wasted in interruptions and restarts, and the use of the automated equipment increases the quality as well as quantity of paperwork produced.

Survey

Before making any changes in the present office environment and before, even, an intelligent decision can be made regarding switching to a word processing concept, a company survey should be made to determine the kind and amount of typing being produced by the typists. Some manufacturers of word processing equipment will make the survey for the prospective buyer of their products; consultants specializing in word processing management will also do the job.

Typically a record is kept of all material typed for periods ranging from one week to a month. This may be done either by having an extra carbon typed of all material or by putting carbonless NCR paper behind every letter and form typed. This material is analyzed in detail as to time consumed in replying to correspondence, the point of origin, clarity of dictation, number of "restarts," and the number of lines generated from each typing station.[33]

A second part of the survey would involve having each secretary indicate on a task sheet how much time she spends daily on different jobs. This

aids management in categorizing its office output as either typing or administrative functions.

Finally, either through personal interviews or by means of a career questionnaire, each secretary would be asked to indicate whether her career preference is in the administrative area or in the word processing area. This helps management in determining the aptitudes, qualifications, and career goals of its personnel for later reassignment. As will be seen later, the development of a word processing center leads to new career paths for clerical workers.

Initial Problems

It would be incorrect to assume that once the decision has been made to begin a word processing center and the survey has been conducted, everything would then fall smoothly into place. Such is not the case.

One old and cherished office tradition that will have to go in the reorganizational shakeup preceding the transition to word processing is the "one-to-one" (one secretary to one executive) tradition. This will be of major concern for both secretary and executive. One of the big attractions to the secretarial profession has been the one-to-one relationship she has typically enjoyed with her boss; and, of course, one of the traditional perquisites of executive rank has been the status associated with having one's own private secretary.

Donna Zack, writing in Today's Secretary, notes a switch in emphasis must be made in that "working in a company that is organized around the word processing concept, the secretary's loyalties evolve from a commitment to the objectives of the company rather than from a commitment to one individual in the organization."[34]

Another major problem with which to contend is that with transcription services so convenient, some executives might become verbose, correlating their own importance with the amount of paperwork they generate. Englund makes the point that "if not properly planned and nurtured, the word processing concept can grow like 'Topsy'. . .and become a status symbol accompanied with the cost of 'keeping up with the Jones Company.'" She concludes that "like many other things in life, easy access can sometimes generate more frequent use (or abuse)."[35]

A case in point is the First National Bank in Little Rock, Arkansas. Its president, Edwin C. Kane, relates that "for the first year after installation of the center, we experienced phenomenal growth--it surpassed our six months' projections in about four weeks."[36] After close scrutiny, they were able to eliminate much of the non-essential work. (They discovered one executive who dictated 47 memorandums to file in one day.[37])

Even with the aid of modern dictating equipment, not all executives are good dictators, and this is a problem with which to contend in the changeover to word processing. Previously, many executives had depended upon jotting down general instructions and having their secretaries compose correspondence for their signature. Under the word processing concept, office personnel are

divided into administrative and corresponding secretaries. For some executives it might make more sense to have access to the word processing center at one of these administrative secretaries' desk rather than at their own.[38]

The secretarial staff itself might initially resist the change to word processing. They might see the centralized center as merely a typing pool and resent the loss of their secretarial status. A common complaint has been, "You're going to make me a typist."[39]

Promoting Word Processing

If the word processing concept is going to enjoy any success at all, it must first of all have the support of those that work there. When Montgomery Ward set up its center, the company spent a large amount of time and money designing attractive facilities for the center. States Mary Kay Fenwick, its director, "Many secretaries volunteered after seeing the center because it was the first indication on the part of the company that we meant it when we said there was a world of difference between a typing pool and a word processing center."[40]

Having been assured of the importance and status of their new jobs, the corresponding secretaries can then act as goodwill ambassadors for the center and help promote its acceptance by all company personnel. This public relations job has been tackled in several ways.

At First Union National Bank of North Carolina, the daily menu of the executive dining room is prepared on word processing equipment and distributed to top executives. "The professional bill-of-fare carries a small credit line identifying the center as the source of the typography. It is a daily reminder to management that the bank has such a versatile center at hand."[41]

Montgomery Ward has prepared a booklet introducing the concept to all employees. Word processing is presented as "providing management with cost control and increased efficiency, and offering the employees new skills, job enrichment, and new career paths."[42]

Some companies sell word processing to their executives by pampering them. Allen Tomlin, word processing manager of State Farm Insurance, says, "One way we keep executives sold is by assigning one PBX message recorder strictly for their use, keeping a close eye on it, and giving rush service in transcribing the dictation belts."[43]

These and other efforts, however, are confirming what managers are discovering--that getting the organization to accept the system is often not the difficult job they feared.[44] A recent Word Processing Institute survey of 129 companies with word processing centers showed the following degree of acceptance by both management and secretarial personnel:[45]

TABLE 2

DEGREE OF ACCEPTANCE BY THE ORGANIZATION

	Favorable	Neutral	Unfavorable
Top management	64%	15%	21%
Middle management	58	21	21
Secretarial staff	39	30	31

The table shows that the secretarial part of the organization is the least receptive to word processing. This indicates that the main thrust of the selling job should be focused upon the word processors themselves.

Management and Administration

Extent of Use by Public Organizations

The benefits of word processing are not limited to business and manufacturing offices. Governmental units are turning increasingly to this new automated concept as a way to stretch the tax dollar.

Hospitals are big users of word processing equipment and are among the oldest. In addition to the cost-savings aspect, patients reap intangible benefits from the new system. By making the telephones potential dictating units and strategically locating them within easy access, doctors are encouraged to keep their charts up to date by simply calling in their diagnoses.

Police departments are another frequent user of word processing equipment. Public telephones become dictation units for police officers who can file their reports without leaving their beats. States M. M. Calvert, chief of Waco, Texas, police department, "Everybody is a specialist now. Our clerical work is done by qualified typists and police officers are doing the professional work for which they were trained."[46]

Everett, Washington, has experienced a severe shortage of police cars since beginning its word processing system. Police officers formerly spent up to 50 percent of their time preparing reports. Now, with their new automated secretarial support center, they have increased the availability of police manpower on the streets; consequently, they have run out of police cars.[47]

Public schools have also gotten into the act. The Berkeley, California, school district has set up a central word processing system which receives and transcribes nearly all the reports and correspondence produced

by 20 schools. Each school administrator telephones the center to dictate, and his school's operating budget is charged for each piece of transcription.[48]

Before switching to the word processing concept, the state of Michigan could afford (monetarily and time wise) only eight copies of a daily status summary of legislation to be produced for the entire 110 House and 38 Senate members. The Status is a daily update showing the provisions of each bill and action taken and scheduled on it. Now with the new "Status Processing Center," each legislator is provided with his own Status at less cost than when the few documents were shared by the entire legislature. This allows each lawmaker to do his job better, and, states William Ryan, Speaker of the House, "That's what all this is about--knowing what's in each bill and having the facts on hand to make a decision."[49]

It can be seen from the above that word processing is not just a money-saving device, it can have important social implications--from providing better medical services to providing more effective law enforcement, and from operating the public schools more effectively to providing more current information for legislators.

Management Techniques

Some techniques for managing the word processing center are common to all centers while others might work well in one and not at all in another. Virtually all centers use continuous-form letterhead stationery, which allows the magnetic media equipment to operate virtually unattended during playback. When the letters are finished, the operator trims off the holes along the edges which were needed to feed the stationery into the machine.

Many companies also use envelopes which are arranged in continuous-form fashion. The operator programs the tape with a switch code so that when she manually types in the name and address for the letter, a tape is cut with the name and address to run with the envelope. This saves the time of manually typing the envelope.[50]

The key to the economic use of expensive word processing equipment is to keep it running. Some companies operate their centers around the clock. (This is not to be confused with having dictation recorders available around the clock. This is mainly a convenience to the executive, although it may also save money. Fibercast Company, in Oklahoma, for example, equipped its five field sales representatives with portable dictation units. As a result, these men no longer needed office space and secretaries, they worked from their homes and saved the company more than $9,500 a year.)[51]

Hiring is seldom a problem for these night shifts; such a schedule might be attractive for part-time workers and less-than-traditional office types. Some companies train housewives for their nighttime operators. Others employ "nighttime hippies" at their centers. One manager reports, "They're intelligent and really very nice."[52] Recognizing the uniqueness of this type of labor market, one firm ran this advertisement for an MT/ST operator--"Wanted: Superchick. Long hours, low pay."--and got the high-quality worker the company was looking for.[53]

Instead of (or in addition to) operating around the clock, other companies take advantage of the automatic typewriter's ability to type unattended. They use the periods that were previously unproductive, such as lunch periods and coffee breaks, to have the machines play back finished letters while the operators are away from their machines.[54]

Cycle typing is also employed in some centers. Under this arrangement, the secretary employs a "split-keyboarding" process, wherein she transcribes from the magnetic belts for 90 minutes, typing at her top speed and correcting errors as she types. Then, for 30 minutes, she plays back the copy automatically and gets a rest. This breaks the monotony and gives the operator a feeling of accomplishment in that she can see the error-free and product typing out.[55]

As a rule, frequent messenger service is provided between the center and the various offices to return the typed correspondence to the point of origin. In fact, L. G. Rhodes, office services supervisor at Weyerhauser, of Tacoma, Washington, lists adequate messenger service, along with proper scheduling and definite deadlines, as absolute musts.[57]

Control Techniques

In addition to determining how the organization rated word processing, the Word Processing Institute study mentioned earlier also found that over half of those centers responding employed 11 or more full-time persons in their centers, and over one fourth employed more than 30.[58] Some element of control is obviously necessary to keep the center from deteriorating into a chaotic paperwork jungle. Again, this is done in various ways.

Montgomery Ward provides control as follows:

> A coordinator in the center, who monitors the bank of recorders, logs and distributes work. A control sheet, created for each document, becomes the permanent record of that document. Work is assigned on the basis of category, degree of complexity, and skill level of the secretary, each of whom is responsible for setup and quality of the document. . . .Each secretary is responsible for grammar, spelling and punctuation, layout, and graphic integrity. She is responsible for editing the author's errors.[59]

At some other companies, the transcribers take turns monitoring the recording units. They also log in the belts received in the mail from traveling executives and record which operators transcribe each belt. This provides control as well as a basis for evaluating the operator's work.[60]

At South Central Bell, of New Orleans, a detailed log is maintained of all work handled, from time of receipt to time of delivery. This log includes such information as time received, the originator, the processor, time delivered, and length of document. If the material is returned later for changes or corrections, the amount of the retyping as well as who caused it is noted on the log. This aids in evaluation of both the dictator and the transcriber.[61]

Control procedures are a little different with the endless-loop systems than with the belt systems described above. The Lanier Nyematic endless-loop dictation unit, for example, features a "Supervisor's Control Console." This console provides detailed information to the coordinator for scheduling, training, and evaluating her workers. Some of its features, as described in its sales brochure, are as follows:

1. Production Totalizer: Keeps a tally of the total volume of transcription done by each secretary, which aids in employee evaluation.

2. Work-Load Indicator: Tells the coordinator exactly how much dictation remains to be transcribed. The work can then be scheduled for the most efficient use of the center's equipment and personnel.

3. Intercom: Permits two-way communication between the coordinator and each individual work station and also between the coordinator and the dictator.

4. Input Programmer: Distributes the dictation according to predetermined instructions. Special types of dictation of a technical or confidential nature can be routed to special operators trained in those areas, or the work load can be distributed equally among all the operators.

Some companies use the production records kept in the center to prepare work standards by which they judge the operator's efficiency. One clerical consulting organization, Bruce Payne and Associates, is applying formalized work standards (such as task analysis, methods/time management, and standard average hours) to the development of standards especially for word processing.[62]

Training Requirements

Basic to the success of word processing or any other business operation is well-trained personnel. Because word processing is a relatively new concept, most companies have had to train their own workers when making the switch, aided by the equipment manufacturers.

Typically, the corresponding secretaries, who will be operating the word processing equipment, receive on-the-job technical training in equipment techniques, center procedures, and a general review of company policy and standards. The administrative secretaries, who will be relieved of their typing duties, receive training in use of the center, telephone dictation, letter composition, records management, and management principles.[63]

Programmed instruction has come into being as a means of providing orientation for new employees as they come into the organization. At First National Bank of Chicago, the coordinators recorded instructions regarding format and procedures on magnetic belts. The trainee listens to the belts at his own pace, typing letters and taking tests at the end of each tape. The coordinator reviews these, and the new employee is generally trained within two days' time.[64]

Secretary's New Role

Career Groups

The role of the secretary is undergoing vast changes in the face of this new concept. The traditional role assigned to the secretary is now being performed by word processing machinery. Emerging in its place are two distinct career groups, and it appears to be a matter of personal preference which is the more challenging job.

For some it will be the corresponding secretary who operates the sophisticated machinery in modern facilities. These "word technicians" must have superior English and transcription skills plus the business acumen needed to produce a finished letter without having to interrupt the executive for minor questions. Because there are other workers to handle the phones, mail, and filing, the corresponding secretary can concentrate without interruption on doing what she has been trained to do--process words.

The other and perhaps less well-defined and less publicized career path is the administrative secretary. She is the assistant who is responsible for telephone handling, filing, mail processing, perhaps customer contact, research reports, and other duties that the group of executives with whom she works might assign. In short, she handles the quasi-professional duties, and her major purpose is to relieve the executive of clerical and routine activities.

Berezin defines her new role this way:

> These are all interesting jobs and, since they occur in the immediate vicinity of where the power is, provide enormous insight into how power is used in business and institutions. The new secretary performs as an executive surrogate when she can, she also serves an "apprenticeship," watching and learning from the skilled executive.[65]

Simpson believes that organizing and running this administrative support function is just as important as organizing and running the word processing center. He gives some guidelines for its efficient operation:[66]

1. Group these administrative secretaries in administrative support centers with four to eight in each location.

2. Assign four to eight principals (executives) to each secretary. (Note the old one-to-one relationship is a thing of the past with word processing.)

3. Establish filing, answering the phone, and handling mail as basic responsibilities of all administrative secretaries. Filing should be done in the support center and not in the principal's office.

There are typically as many as five or six levels of advancement in each of the two career groups, and the levels are equal on both sides. For corresponding secretaries, the level is based upon the complexity of the machine skills involved, the confidentiality or complexity of the material to be transcribed, and the quality and amount of work produced.[67] The levels within the administrative secretarial group are not based on the organizational level of the principal they serve but on the level of the secretarial work itself.

Job Enrichment

The implications of word processing for the secretary go far beyond these two career groups. New promotional opportunities are opening up, secretaries can aspire to management and supervisory positions both within and beyond the word processing center. Internal promotion is a common practice in word processing. At Montgomery Ward, for example, all of the supervisors are professional secretaries.[68] And at IBM,

> The young lady who applies for and accepts a position as an associate secretary--our starting secretarial position--knows from the beginning that she can advance to jobs in both first- and second-line management, both in and outside of the word processing structure.[69]

Word processing, as Zack puts it, "places the supervision and evaluation of a secretary's work in the hands of one who knows it best--the experienced secretary with managerial responsibilities."[70]

Implications for Educators

Word processing has far-reaching implications for business educators, and those in charge of administering word processing centers are anxious for schools to get started training the type of qualified personnel that such centers need. This was made clear to the writer of this paper from personal correspondence received from word processing managers from around the country.

Mrs. Phyllis Perry, president of the Word Processing Association of Arkansas, wrote, "Word processing requires immediate attention from educators, and we are very pleased to know you folks are moving in that direction."[71]

From Mrs. Marian M. Cole, supervisor of word processing for the Northern Natural Gas Company, of Omaha, Nebraska, came this message: "Your letter. . .has been received with great interest. We are pleased to learn that schools such as yours are aware of the need for specialized training to prepare students for positions in the newly developing fields of word processing."[72]

And, finally, Ms. Mary Kaye Fenwick, administrative support manager at Montgomery Ward, wrote, "We are delighted to see that educational institutions are becoming interested!"[73]

Word processing has been around since shortly after the introduction of the MT/ST in 1964. Why have schools been so reluctant to prepare students for the new knowledges and skills needed in this expanding area of business services?

One main reason, of course, is the expense of acquiring word processing equipment. At a time when school bond referendums are being rejected across the nation and when college administrators are telling their chairmen to hold down costs, budget-minded managers are reluctant to make the capital outlay of $6,000 or so per machine.

One business executive, however, insists that the real problem lies with the teaching profession itself: Business teachers either lack interest or want to preserve the status quo. Eunice Crooks, president of E. C. Secretarial Services, of Chicago, believes that "after many years in the teaching area, it appears that far too many instructors entrusted with the task of teaching typing and other secretarial subjects are almost averse to new equipment, new methods, and new texts."[74]

Regardless of who is to blame for the schools' lagging behind, there are some notable exceptions. The Concord, California, school district is one such system. Students are bused in from seven high schools in the district to take a technical typing course offered two periods each day. By centralizing the instruction at one location, an expanded program using the latest equipment is possible. Students learn to operate all types of word processing equipment, from MT/ST's and MT/SC's to typewriters with special technical elements, proportional spacing, and changeable type bars.

The course outline lists eight objectives of this innovative program:[75]

1. Think through complicated jobs to find acceptable solutions.
2. Type difficult mathematical equations and chemical formulas and symbols using special changeable bars.
3. Prepare reports, manuals, and technical proposals for reproduction.
4. Operate modern word processing equipment, such as the magnetic tape typewriter, magnetic tape composer system, and dictation equipment.
5. Type justified copy for reproduction.
6. Prepare technical reports requiring familiarization with the Greek alphabet, or from complex rough draft copy.
7. Handle classified documents.
8. Prepare standard forms and correspondence for military and general business applications.

Each student rotates on the different machines at his own pace and builds up a portfolio of professionally prepared exercises and jobs which aids him in securing employment after he leaves school.

Students are motivated because they feel that what they are learning is relevant to today's business environment, and the high schools believe they are fulfilling their obligations to both student and community by providing training for entry-level jobs in the rapidly growing technical typist field.[76]

Educational Requirements

It is no secret what type of workers the word processing centers require and what type of training is needed--word processing managers have made clear the particular skills and attitudes they consider necessary.

Cole would like to see "more concentration on spelling, grammar, punctuation, vocabulary, and typing speed combined with an awareness of the need for accuracy."[77] She explains the continued need for accuracy even on "forgiving keyboards" by noting "the more accurate an operator is, the faster she will be able to process the work, with far less editing and far fewer mistakes to catch on her playback."[78]

Cole notes also that far too many job applicants cannot pass a simple spelling test with a score of 90 percent which they require, do not have a good background in basic English, and are not trained for machine dictation.[79]

Perry also has trouble finding the qualified operators her center needs: "We probably interview and test five girls for every one we hire."[80] She stresses the importance of good grammar skills, including spelling, punctuation, and vocabulary.

This lack of skilled operators was also noted by Crenshaw--"When a trained MT/ST operator applied for a job recently, I immediately hired her--around our area, it's highly unusual to find trained operators."[81]

Attitudes and emotional traits are important. Crenshaw says, "I am looking more for the girls who will adapt. . ."[82] Cole believes that "the ability to work without constant supervision should be stressed as well as working under pressure."[83]

But Perry gives perhaps the most basic and far-reaching advice of all:

> Our only suggestion to educators everywhere is simply to prepare people to work, not hold a position. Many, many people drift from job to job because they have not yet learned the difference between the two. Skills are important, today and tomorrow, but a willingness and desire to work makes skill level almost a secondary consideration in trying to choose long-term employees, particularly young ones.[84]

Future of Shorthand

The controversy concerning the future of shorthand is one with which business educators must come to grips. In the past, the death knoll has been sounded periodically for manual shorthand systems, and it is probably true that there has been a decline in the demand for shorthand writers because of the increased use of machine dictation.[85]

However, it is difficult to gauge the effect that word processing will have on this trend because a great percentage of executives who now use or will install word processing equipment may currently be using machine dictation equipment, which requires no shorthand in the first place.[86]

It appears that the greatest use of shorthand in the future will be at meetings and conferences, where verbatim recording is neither needed nor desired. Here the stenographer (regardless of her title) must make judgments concerning what points merit recording, and she must synthesize what transpires at these meetings. It will be this editing ability that makes the human preferable to the machine in such situations.

FOOTNOTES

[1]"New Word Processing Center Speeds Paperwork," Industrial Arts Methods (December 1971), p. 17.

[2]Walter A. Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," Administrative Management (June 1971), p. 20.

[3]Shirley Englund, "Word Processing," The Secretary (December 1971), p. 22.

[4]William F. Laughlin, "Word Processing Can Reduce Office Costs," The Office (February 1972), p. 56.

[5]Ibid.

[6]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 23.

[7]Sam Bellotto, Jr., "Subsystem I: Dictating Equipment and the Word Originator," Administrative Management (June 1971), p. 36.

[8]Laughlin, op. cit.

[9]Steinberg, op. cit.

[10]"Dictating Equipment for Word Processing," The Office (February 1972), p. 76.

[11]"IBM's Office Products Division in Bergen County," Bergen (January 1972), pp. 3-4.

[12]James Shultz, "Automatic Repetitive Typing," The Office (February 1972), p. 11.

[13]McGlynn, op. cit.

[14]Shultz, op. cit., p. 10.

[15]Ibid., p. 12.

[16]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 21.

[17]"User's Guide to Automatic Editing Typing Systems," The Office (February 1972), p. 71.

[18]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 22.

[19]Aldor B. Elmquist, "Sandoz Does the Whole Thing," Administrative Management (April 1972), p. 40.

[20]"Word Processing," Government Data Systems (November/December 1971), p. 19.

[21]"Enclosures Cut the Clatter," Administrative Management (April 1972), p. 68.

[22]Bellotto, op. cit., p. 36.

[23]Ibid., p. 38.

[24]Ibid., p. 42.

[25]"'Word Processing' User Group Exchanges Ideas," op. cit., p. 40.

[26]Ibid., pp. 40-41.

[27]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 24.

[28]Ibid.

[29]McGlynn, op. cit.

[30]Laughlin, op. cit., pp. 57-58.

[31]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 24.

[32]Ibid.

[33]"How Santa Fe Streamlines Office Operations," Railway Age (August 19, 1968), p. 24.

[34]Donna Zack, "Word Processing and You," Today's Secretary (November 1971), p. 30.

[35]Englund, "Word Processing," op. cit., p. 31.

[36]"'Word Processing' User Group Exchanges Ideas," op. cit., p. 41.

[37]Ibid.

[38]Englund, "Word Processing," op. cit., p. 31.

[39]Mary Kaye Fenwick, "How Montgomery Ward Planned Its Word Processing Center," The Office (February 1972), p. 55.

[40]Ibid.

[41]Walter A. Kleinschrod, "How a Bank 'Sells' WP to Its Management," Administrative Management (February 1972), p. 43.

[42]Fenwick, op. cit., p. 51.

[43]"'Word Processing' User Group Exchanges Ideas," op. cit.

[44]Kleinschrod, "How a Bank 'Sells' WP to Its Management," op. cit. p. 44.

[45]"How the Organization Rates WP," Administrative Management (February 1972), pp. 38-41.

[46]M. M. Calvert, "'Word Processing' Frees Officers from Clerical Work," Law and Order (July 1971), p. 60.

[47]Jack V. McKenzie, "Everett's Automated Typing Center Puts 25% More Police in the Field," Western City (July 1971), p. 26.

[48]"The Words Go Round and Round and Come Out Here," School Product News (May 1971), p. 63.

[49]William A. Ryan, "Status of Proposed Legislation Is Automated," Michigan Municipal Review (March 1972), p. 58.

[50]"Centralized Word Processing System Speeds Letter Preparation," Spectator (February 1971), p. 43.

[51]"Fibercast Co. Saves Hundreds of Man-Hours with Telephone Dictation, Magnetic Typewriters," Mid-Continent Purchaser (July 1971), p. 10.

[52]"Is T/S Okay for WP?" Administrative Management (June 1971), p. 50.

[53]Ibid.

[54]Laughlin, op. cit., p. 58.

[55]James T. McAfee, Jr., "Communications in the Hospital," Southern Hospitals (February 1971), p. 8.

[56]"Centralized Word Processing System Speeds Letter Preparation," op. cit., p. 42.

[57]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 25.

[58]"How the Organization Rates WP," op. cit., pp. 38-41.

[59]Fenwick, op. cit., p. 53.

[60]Sullivan, op. cit., p. 26.

[61]W. H. McElroy, "Endless Loop to the Rescue," Administrative Management (April 1972), p. 44.

[62]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 24.

[63]Fenwick, op. cit., p. 55.

[64]Sullivan, op. cit., p. 28.

[65]Berezin, op. cit., p. 12.

[66]George R. Simpson, "Administrative Support Function Just as Important as Setting Up Your Company's WP Center," Administrative Management (May 1972), p. 58.

[67]Fenwick, op. cit., p. 55.

[68]Ibid., p. 52.

[69]McGlynn, op. cit.

[70]Zack, op. cit., p. 64.

[71]Phyllis Perry, personal letter, April 21, 1972.

[72]Marian M. Cole, personal letter, May 1, 1972.

[73]Mary Kaye Fenwick, personal letter, June 27, 1972.

[74]Eunice Crooks, "Business Schools Should Offer Courses for WP as 'Profession.' Administrative Management (April 1972), p. 50.

[75]"Modern Word Processing Equipment Aids High School Students," Modern Schools (March 1971), p. 8.

[76]Ibid., p. 7

[77]Cole, op. cit.

[78]Ibid.

[79]Ibid.

[80]Perry, op. cit.

[81]Doris Crenshaw, personal letter, April 25, 1972.

[82]Ibid.

[83]Cole, op. cit.

[84]Perry, op. cit.

[85]Shirley Englund, personal letter, March 31, 1972.

[86]Ibid.

CHAPTER III

RECOMMENDATIONS AND CONCLUSION

Recommendations

Business educators must realize that word processing will have a dramatic effect on the employment needs of the business community. They should survey the local business environment to determine to what extent their schools need to revise their curriculums in order to train their students for entry-level office positions within the community.

If it is found that the local employment area is entering the word processing domain, then as a minimum, the following suggestions are made by this writer:

1. Less emphasis should be placed on shorthand speed and more emphasis on transcription ability.

2. If it is not economically feasible to provide the expensive word processing equipment for classroom use, students should at least be exposed to machine transcription, not only at the orientation and familiarity levels but also at the vocational-competence level.

3. An increased amount of class time should be provided during the student's terminal business class, whether it be second-year shorthand, typewriting, secretarial procedures, or something else, for such non-skill learning experiences as editing and abstracting copy, composing, and handling classified and rush projects.

4. Throughout his business courses the student should be exposed, using whatever means and methods available, to situations which aid in the development of those attitudes and traits which, while not unique to the word processing environment, nevertheless are more in demand there. These would include the ability to work without supervision and under pressure, the development of good judgment and initiative, and the ability to make decisions and follow through. These traits are not learned by the student automatically or merely through his reading them or being told about them. The instructor must provide conscious and directed learning activities designed to instill them in the student as a basic part of his training.

Conclusion

The basic objective of word processing is to make secretarial services available to everyone who needs them and at the lowest possible cost. Typing remains the basic office function[1]--it was the first practical office machine and is still the most widely used.[2]

The concept of word processing is much in vogue today--it is very fashionable to install such a system and then have it written up in a trade publication. In fact, one can hardly pick up a magazine today without reading something about word processing. It would be a mistake, however, to assume that word processing is a fleeting idea that will run its course and then fade away.

Many people believe that the impact of this new management concept on modern offices will be just as great as data processing. The MT/ST is to the secretary what the computer is to the mathematician or engineer.

It is in the word processing center that sophisticated office equipment comes into its own, but sophisticated equipment alone is not the answer. "The key to true word processing," states McGlynn, "is the systemization of equipment and people--but not in a depersonalized sense."[3] The more the work is centralized, routinized, and controlled, the more efficient the operation will be, but convenience and the personal touch may diminish. The question is, how far in this direction does the company want to go.[4]

For years, office administrators have been criticized for not adapting modern factory methods to office management. Now, with word processing's emphasis on the word total, an assembly line for words has been created. And one writer suggests that the time will come when plant managers will be asked, "Why don't you automate your work as they do in the office?"[5]

Englund puts the whole concept in perspective when she writes that "Whether through this method or some other, today's office must be a facility based on change if it is to succeed, and the people in today's offices must be adaptable to change if they are to succeed."[6]

Word processing may not be a panacea for the paperwork explosion, but the writer of this paper believes that it is clearly a step in the right direction. It is an important beginning.

FOOTNOTES

[1]Birkhold, op. cit., p. 66.

[2]"A Giant Step for Typewriting," The Office (February 1972), p. 132.

[3]McGlynn, op. cit.

[4]Kleinschrod, "That 'Gal Friday' Is a Typing Specialist Now," op. cit., p. 23.

[5]"A Giant Step for Typewriting," op. cit., p. 132.

[6]Englund, "Word Processing," op. cit., p. 31.

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